

CONFORMAL SURFACE SILICIDE STRAP ON SPACER AND METHOD OF  
MAKING SAME

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ABSTRACT

A semiconductor structure is provided that includes a gate, a dielectric spacer located adjacent to a sidewall of the gate, a source/drain region, and a continuous silicide strap located over the gate, the dielectric spacer and the source/drain region. The silicide strap provides an electrical connection between the gate and the source drain region. In one embodiment, the silicide strap is formed by a method that includes the steps of (1) implanting a semiconductor material, such as silicon, into upper surfaces of the gate, the dielectric spacer, and the source/drain region, (2) depositing a refractory metal over the implanted semiconductor material, and (3) reacting the refractory metal with the implanted semiconductor material, thereby forming the continuous silicide strap at the upper surfaces of the gate, the dielectric spacer and the source/drain region. Advantageously, the dielectric spacer does not need to be removed prior to forming the silicide strap.